

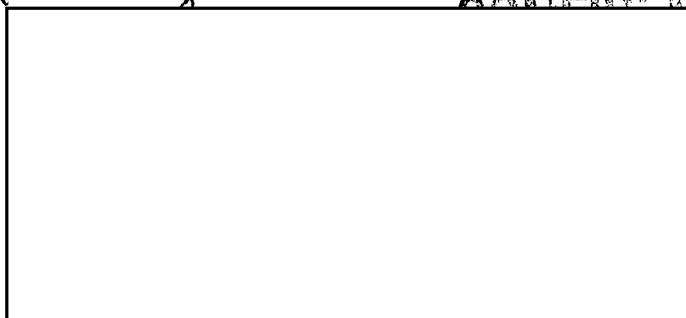
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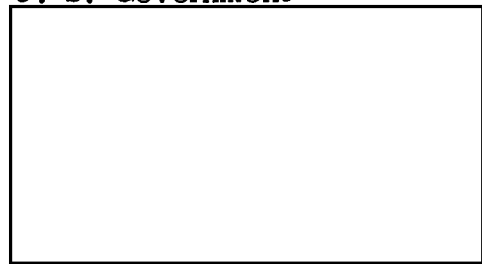
CONFIDENTIAL

3 December 1964

Please Reference:
A51-64-2062

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U. S. Government



Declass Review by
NIMA/DOD

Our Sales Order 1-10025-1

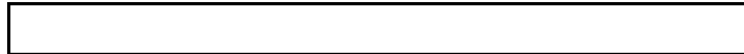
Gentlemen:

We are pleased to provide the fourth in a series of Monthly Progress Reports covering the effort expended on subject contract during the period November 2nd to December 1st, 1964.

In the area of research, pressure drop tests through standard P.V.C. piping and fittings were completed. Comparative tests with stainless steel piping and sanitary type fittings were temporarily suspended, pending research to ascertain if accurate data is available from manufacturers of this equipment.

Tests were commenced on liquid bearings to explore the complex interrelationship of inlet pressure, slot width, inlet-to-plenum area ratios and waterfall profile, with the objective of setting up design criteria for self-centering bearings using the crown effect. One significant finding on a narrow prototype liquid bearing, whose cross-sectional configuration was rectangular with a half-round section in the plenum-slot area, was that the slot pressure profile was substantially independent of the slot width.

When the waterfall pressure profile experiment was repeated on a smooth-walled tube of circular cross-section, the pressure pattern was almost flat throughout the 9 1/2 inch length of the slot. This clearly indicates the need for a series of experiments in which the opaque liquid bearing tube body is replaced with transparent methacrylate and provisions made for introducing tracer streams to mark the flow pattern. From this information, it is hoped that a mathematical derivation can be developed for a scientifically-designed equalizer to produce a self-centering crown-effect liquid bearing.

During the week of November 16th to November 20th a visit was paid to this establishment by  A briefing

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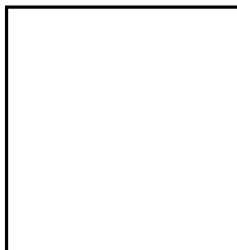
25X1 on the manning of the program, assignment control and program content was given. A schedule of erection of the clean room was also presented. Mr. [] summarized the program content as being satisfactory, but stated his opinion that due to a slow start after signing of the contract, an accelerated effort should be instituted to recover lost time.

25X1 In acknowledgment of [] statement, the following program has been compiled.

1. Assessment of film drag parameters.
2. Research into liquid bearings to obtain optimum configuration of slots, diameters, pressures and flows, etc.
3. On the basis of results of Items 1 and 2 to design, construct and test a liquid bearing.
4. To evaluate, construct and test a tank with integral temperature control, complete with demonstration bearings, and power supply as a self-contained module.
5. Determination of maximum processing rates at elevated temperatures for processing of standard aerial films to provide data for tank and temperature control equipment design.

The objective of the above accelerated program is to produce a sample modular clean room type tank complete with bearings and temperature control, together with all technical data essential to proving its operational and functional performance. This program will be proceeded with immediately unless instructions to the contrary are received.

The program is now actively staffed by the following personnel.



25X1 Research Manager
Senior Staff Engineer
Senior Staff Engineer
(relieved from other duties Nov. 30th, 1964)
Associate Photographic Engineer
Design Engineer-attached to program for specific task.

(Cont'd)

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Three flip charts showing the complete program breakdown are in the course of preparation and will be forwarded under separate cover on or before December 10th, 1964.

The majority of all components necessary for erection of the clean room have been received, assembly of the floor structure has been commenced, and it is anticipated that the schedule will be adhered to.

Funds committed or expended to date are approximately If you should have any questions or desire further information, please do not hesitate to contact us.

25X1

Very truly yours,



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MCM/bls

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| CONTRACT INSPECTION REPORT | | | CONTRACT NO. | | TASK NO. | |
|--|-------|----------------|--|-------|----------------|--|
| TO: ENGINEERING SECTION/CB/PD/OL | | | DATE 1 Dec 64 | | | |
| | | | INSPECTION REPORT NO. (If final, so state) 4 | | | |
| | | | ESTIMATED COMPLETION DATE 30 Jun 65 | | | |
| NAME OF CONTRACTOR | | | | | | |
| TYPE OF COMMODITY OR SERVICE Film Processor Program | | | | | | |
| THE CONTRACTOR IS ON SCHEDULE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO | | | THE CONTRACTOR WILL PROBABLY REMAIN WITHIN ALLOCATED FUNDS <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF ANSWER IS "NO" ADVISE RECOMMENDATION AND/OR ACTION OF SPONSORING OFFICE, ON REVERSE HEREOF. IF KNOWN, INDICATE MAGNITUDE OF ADDITIONAL FUNDS INVOLVED. | | | |
| PER CENT OF WORK COMPLETED 30% | | | | | | |
| HAS AN INTERIM REPORT, FINAL REPORT, PROTOTYPE, OR OTHER END ITEM BEEN RECEIVED FROM THE CONTRACTOR DURING THE PERIOD? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO (If yes, give details on reverse side.) | | | | | | |
| HAS GOVERNMENT-OWNED PROPERTY BEEN DELIVERED TO CONTRACTOR DURING THIS PERIOD? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO (If yes, indicate items, quantity, and cost on reverse side.) | | | | | | |
| Refer to inspection report dated 3 Nov. 1964. | | | | | | |
| OVERALL PERFORMANCE OF CONTRACTOR | | | | | | |
| 1. <input type="checkbox"/> OUTSTANDING 3. <input type="checkbox"/> ABOVE AVERAGE 5. <input type="checkbox"/> BELOW AVERAGE 7. <input type="checkbox"/> UNSATISFACTORY | | | | | | |
| 2. <input type="checkbox"/> EXCELLENT 4. <input checked="" type="checkbox"/> AVERAGE 6. <input type="checkbox"/> BARELY ADEQUATE | | | | | | |
| IF OVERALL PERFORMANCE OF CONTRACTOR IS UNSATISFACTORY OR BARELY ADEQUATE, INDICATE REASONS ON REVERSE SIDE. | | | | | | |
| RECOMMENDED ACTION | | | | | | |
| <input checked="" type="checkbox"/> CONTINUE AS PROGRAMMED <input type="checkbox"/> WITHHOLD PAYMENT PENDING SATISFACTORY PERFORMANCE | | | | | | |
| <input type="checkbox"/> TERMINATE <input type="checkbox"/> OTHER (Specify) | | | | | | |
| IF TERMINATION IS RECOMMENDED OR IF THIS IS A FINAL REPORT ATTACH COMMENTS IN NARRATIVE FORM ON CONTRACTOR'S PERFORMANCE AND CERTIFY THAT ALL DELIVERABLE ITEMS UNDER THE CONTRACT HAVE BEEN RECEIVED. THESE INCLUDE, WHERE APPLICABLE, THE FOLLOWING: | | | | | | |
| ITEM | REC'D | DOES NOT APPLY | ITEM | REC'D | DOES NOT APPLY | |
| PROTOTYPES | | | MANUALS | | | |
| DRAWINGS AND SPECIFICATIONS | | | FINAL REPORT | | | |
| PRODUCTION AND/OR OTHER END ITEMS | | | SPECIAL TOOLING | | | |
| | | | OTHER GOVERNMENT PROPERTY | | | |
| DATE OF LAST CONTACT WITH CONTRACTOR 24 Oct 64 | | | | | | |
| SIGNATURE OF INSPECTOR | | | DIVISION | | | |
| | | | | | | |
| INS | | | | | | |

FOR 6-64 1097 PREVIOUS EDITION

SECRET

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